Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 November 2002</u> .

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-45</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-45</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

　　If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____ .

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　application from the International Bureau (PCT Rule 17.2(a)).
　　* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

　　a)☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: .

DETAILED ACTION

Response to Amendment

1.   Claims **1-45** are pending in the present application.

Response to Arguments

2.   Applicant's arguments filed November 25, 2002 have been fully considered but
they are not persuasive. Rom, Volino, and Sakaguchi teach the claimed limitations.

Rom teaches virtual dressing over the Internet for displaying garments over the
Internet as through the garments were being draped over the body of the user (col.1,
line 48 to col. 3, line.46). In that Rom teaches generating rendering frames containing
mannequin or garment objects as defined by selected parameter values by shape
blending corresponding objects of previously generated rendering frames (col. 1, line 53
to col. 2, line 11; col. 7-8; figs. 1-3). In other words, Rom teaches fitting articles of
clothing to an image of a user over the Internet. The image of the user is used to adjust
the spatial configuration of the clothing. That is the shape blending fact is the article of
clothing adjusted to match critical points of the image of the body of the user.

While Voline and Sakaguchi teaches that it's well known to generate three
dimensional rendering frame of the mannequin wearing the garment (Voline—page 42;
Sakaguchi—page 1). Both Voline and Sakaguchi teach simulating clothes on virtual
actors so that the images of the respective patterns are three-dimensional form.
Sakaguchi specifically teaches a stereoscopic image of the garment is generated by
connecting the deformed 3D images of the respective patterns based on the information
on the garment. On a further note, in the previous office action Examiner only

addresses Voline and Sakaguchi as teaching three dimensional while Rom as teaching

two dimensional in relation to simulating garments.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims **1-45** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Rom (US patent no. 6,307,568) in view of non-patent literature Volino, P., et al., ("An

Evolving System for Simulating Clothes on Virtual Actors", Computer Graphics in

Textiles and Apparel, 42-51, (September 1996)) and further in view of Sakaguchi (CA

patent no. 2,259,788).

Re claims **1, 16, 19, 29, 32, 34, 38, and 44**, the prior art Rom had:

A.) Simulating draping and collision of the garment with the mannequin within the

simulation scene to generate frame of the mannequin wearing the garment (col. 3, line

63 to col. 4, line 11; col. 5, lines 3-13; abstract). In other words, Rom teaches a virtual

dressing method for displaying garments were the garments were being draped and

cling (i.e. collision) over the body of the image of a user.

B.) Constraining portions of the garment to reside within or outside of particular

shells defined around the mannequin in the rendering frame (col. 2, lines 34-42; fig. 2).

In other words, Rom determines garment adjustment points of the garment spatial

configuration. The determining points are the particular shells that defined the spatial

configuration of the image.

C.) Generating rendering frames containing mannequin or garment objects as

defined by selected parameter values by shape blending corresponding objects of

previously generated rendering frames (col. 1, line 53 to col. 2, line 11; col. 7-8; figs. 1-

3). In other words, Rom teaches fitting articles of clothing to an image of a user over

the Internet. The image of the user is used to adjust the spatial configuration of the

clothing. That is the shape blending fact is the article of clothing adjusted to match

critical points of the image of the body of the user.

Rom fails to specifically disclose a method for producing an image of a computer-

simulated mannequin wearing a garment as defined by selected mannequin and

garment parameter values, comprising of generating objects corresponding to a

representative mannequin and a garment placed in a simulation scene within a three-

dimensional modeling environment.

However, Volino specifically teaches a method for producing an image of a

computer-simulated mannequin wearing a garment as defined by selected mannequin

and garment parameter values, comprising of generating objects corresponding to a

representative mannequin and a garment placed in a simulation scene within a three-

dimensional modeling environment (pages 42, 44, and 48). In other words, Volino

teaches computer simulating clothes on a mannequin to visualize collisions and draping

of the garment (page 42). The simulation software of Volino consisting of data structure

that stores all object information which computes all objects in the structure (page 44).

Furthermore, the 3D simulation process constructs the garment design (page 48).

Therefore, taking the combined teaching of Rom and Volino as a whole, it would

have been obvious to combine the teaching of Volino to the system of Rom because

doing so would have enabled simulating clothes on a mannequin using computer virtual

dressing as noted in Volino (pages 42, 44, and 48).

Rom and Volino fail to specifically disclose generating rendering frames

containing mannequin or garment objects as defined by selected parameter values by

shape blending corresponding objects of previously generated rendering frames.

However, Sakaguchi specifically teaches generating rendering frames containing

mannequin or garment objects as defined by selected parameter values by shape

blending corresponding objects of previously generated rendering frames (page 31-

second paragraph to page 33). In other words, Sakaguchi using the index (i.e.

parameter values) to shape the garment. The frame of the garment is generated by

clicking the mouse to bring the cursor K to the input window for the shape of the

garment.

Therefore, taking the combined teaching of Rom and Volino as a whole, it would

have been obvious to combine the teaching of Sakaguchi to the system of Rom and

Volino because doing so would have enabled generating the shape of the garment for

different users with different model of the garment as noted in Sakaguchi (page 31-

second paragraph to page 33 and page 35; page 66; fig. 23-25).

Re claims **2, 35, and 43**, Rom discloses the rendered image is used to form a visual image on a computer display device (col. 6, lines 13-19; fig. 2). In other words, Rom teaches the final output of the image is displaying on the GUI.

Re claims **5, 23, 42 and 45**, Rom discloses the two-dimensional images are rendered from a rendering frame using a plurality of camera positions (col. 6, lines 33-45). In other words, Rom teaches a digital camera that captures the user's position then incorporated into the computer to render the user's image for the particular garment.

Re claims **10-12 and 39**, Sakaguchi discloses the separate rendering frames are combined into a composite two-dimensional image using Z-coordinates of the objects (page 66 to 68). Sakaguchi teaches calculating different frames with different indices or points for the shape of garment.

Re claims **14-15**, Sakaguchi discloses a network and a processor-executable instructions (fig. 13). In figure 13, Sakaguchi uses the network system by using the Internet and Intranet for his system. Furthermore, the application consisting of an executable instruction.

Re claims **3-4, 6-9, 13, 17-18, 20-22, 24-28, 30-31, 33, 36, 40-41**, the limitations of these claims are analyzed as discussed with respect to claims 1, 16, 19, 29, 32, 34, 38, and 44 above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Inquiries

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Thu-Thao Havan whose telephone number is (703)

308-7062. The examiner can normally be reached on Monday to Thursday from 9:00-

5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Michael Razavi can be reached on (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

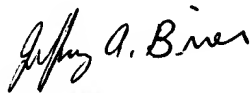(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the Technology Center 2600 Customer Service Office

whose telephone number is (703) 306-0377.

Thu-Thao Havan

JEFFERY BRIER
PRIMARY EXAMINER

March 12, 2003